WHAT IS CLAIMED IS:

1. An automated medication preparation system including automated syringe preparation comprising:

a first automated gripping means for removing a tip cap from a barrel of one syringe and placing the removed tip cap at a first location;

an automated device for delivering a prescribed dosage amount of medication to the syringe by injecting the medication through the uncapped barrel in a just-in-time for use manner;

a second automated gripping means for replacing the removed tip cap on the syringe barrel after the medication is injected therein; and

a coupling device for joining the tip cap to the syringe barrel in a local area to produce a tamper evident syringe, wherein the syringe is automatically advanced from the second automated gripping means to the coupling device.

2. The automated system of claim 1, wherein each of the first and second automated gripping means comprises a robotic device having first and second gripping arms that are spaced apart from one another in a first position and are moved toward one another to a second position so as to securely capture and hold the tip cap between the first and second gripping arms.

3. The automated system of claim 2, wherein the robotic device is movable at least along an x axis and a y axis.

4. The automated system of claim 1, further including:

a post at the first location for receiving and holding the removed tip cap.

5. The automated system of claim 1, further including:

an automated device for extending a plunger of the syringe barrel.

6. The automated system of claim 5, wherein the automated device is operatively connected to a control unit which instructs the automated device to extend the plunger a predetermined distance based on the prescribed amount of medication.

7. The automated system of claim 1, further including an automated rotary device that is indexed to advance the syringe from one station to another station, the rotary device having a first feature formed as part thereof for releasably retaining the syringe and a second feature for holding the removed tip cap as the syringe is advanced from one station to the next.

8. The automated system of claim 1, wherein the automated device for delivering a prescribed dosage amount of medication to the syringe comprises a robotic device having a pivotable arm that includes a platform section having a first face and an opposing

second face, a cannula extending through the platform away from the first face for receiving the medication from a supply, the cannula being operatively connected to an apparatus that draws the medication from the supply into the cannula when actuated.

9. The automated system of claim 8, wherein the apparatus comprises an aspirating device that applies negative pressure to an interior of the cannula to cause the medication to be drawn from the supply to the cannula.

10. The automated system of claim 1, wherein the first and second gripping means, the automated delivery device and the coupling device are all part of an indexed system in which the syringe is automatically advanced from one station to a next station.

11. The automated system of claim 1, wherein the coupling device comprises a heat-staking device including a tool for transferring heat to the tip cap resulting in localized melting of the tip cap and bonding to an outer surface of a syringe luer connector.

12. The automated system of claim 11, wherein the tool is selected from the group consisting of a heated wire and a heated probe.

13. The automated system of claim 1, wherein the tip cap is joined to a syringe luer connector at a plurality of locations circumferentially around the tip cap.

14. The automated system of claim 1, wherein the coupling device comprises a laser that emits a laser beam that causes the joining between the tip cap and a syringe luer connector in the local area.

15. The automated system of claim 1, wherein the coupling device comprises an ultrasonic welder that joins the tip cap and the syringe barrel through pressure and high frequency mechanical vibrations, creating localized frictional heat that melts the tip cap and syringe luer connector together, both of which are formed of a plastic material.

16. The automated system of claim 1, wherein the coupling device is in communication with a controller that controls a temperature of a direct contact-heated tool and monitors and controls a time period that the tool is in contact with the tip cap.

17. The automated system of claim 1, wherein the tip cap and a syringe luer connector are joined at a spot weld that has a substantially circular shape.

18. The automated system of claim 1, wherein the coupling device comprises a heat-stake device that includes a plurality of interchangeable direct contact-heated tools.

19. The automated system of claim 1, further including:

an automated member for receiving and holding the syringe barrel after it is has been filled so that the movement thereof is prevented when the coupling device acts on the syringe to join the tip cap to the syringe barrel.

20. The automated system of claim 1, wherein the coupling device is a tamper evident tape dispenser that disperses tape and presses the tape into contact with one side of the syringe barrel and then directing the tape up the syringe barrel to the tip cap where the tape is laid across a top of the tip cap and then down an opposite side of the syringe barrel.

21. An automated medication preparation system including automated syringe preparation comprising:

a first automated device for removing a tip cap from a barrel of one syringe and placing the removed tip cap at a first location;

an automated transfer device for delivering a prescribed dosage amount of medication to the syringe by injecting the medication through the uncapped barrel in a just-in-time for use manner;

a second automated device for replacing the removed tip cap on the syringe barrel after the medication is injected therein; and

a station for making the syringe tamper evident, the station including a device for joining the tip cap to the syringe barrel in a local area by heating and reflowing a section of the tip cap into contact with the syringe barrel whereupon cooling, a local weld is formed

between the tip cap and the syringe barrel, wherein the syringe is automatically advanced from the second automated device to the station for making the syringe tamper evident.

22. The system of claim 21, wherein the weld is formed between a flange of the tip cap and an outer hub of the syringe barrel.

23. The automated system of claim 21, wherein the device for joining the tip cap to the syringe luer connector comprises a heat-staking device including a tool for transferring heat to the tip cap resulting in localized melting of the tip cap and bonding to an outer surface of the syringe barrel.

24. The automated system of claim 23, wherein the tool is selected from the group consisting of a heated wire and a heated probe.

25. The automated system of claim 23, wherein the tip cap is joined to the syringe luer connector at a plurality of locations circumferentially around the tip cap and wiping a tamper evident tape around the tip cap.

26. The automated system of claim 21, wherein the device for joining the tip cap to the syringe luer connector comprises a laser that emits a laser beam that causes the joining between the tip cap and the syringe barrel in the local area.

27. The automated system of claim 21, wherein the device for joining the tip cap to the syringe luer connector comprises an ultrasonic welder that joins the tip cap and the syringe luer connector through pressure and high frequency mechanical vibrations, creating localized frictional heat that melts the tip cap and syringe luer connector together, both of which are formed of a plastic material.

28. The automated system of claim 21, wherein the device for joining the tip cap to the syringe luer connector is in communication with a controller that controls a temperature of a direct contact-heated tool and monitors and controls a time period that the tool is in contact with the tip cap.

29. An automated medication preparation system including automated syringe preparation comprising:

a first automated gripping means for removing a tip cap from a barrel of one syringe and placing the removed tip cap at a first location;

an automated device for delivering a prescribed dosage amount of medication to the syringe by injecting the medication through the uncapped barrel in a just-in-time for use manner;

a second automated gripping means for replacing the removed tip cap on the syringe barrel after the medication is injected therein; and

a mechanism for capturing the syringe containing the prescribed dosage amount between two sheets of plastic material and then evacuating air from between the sheets to form

and capture the syringe in a shrink wrapped package which has a perforated seam formed therein to assist a user in opening of the package.

30. An automated medication preparation system including automated syringe preparation comprising:

a plurality of stations for removing a tip cap from a barrel of one syringe, delivering a prescribed dosage amount of medication to the syringe in a just-in-time for use manner, and replacing the removed tip cap on the syringe luer connector after the medication is delivered thereto; and

a station for making the syringe tamper evident, the station including a device for joining the tip cap to a syringe luer connector in a local area by forming a local weld between the tip cap and the syringe luer connector so as to restrict twisting and removal of the tip cap, wherein the syringe is automatically advanced from the second automated device to the station for making the syringe tamper evident.

31. A method for just-in-time removal of a tip cap from a syringe barrel, filling the syringe with a prescribed dose of medication, replacing the tip cap on the syringe barrel and making the syringe tamper evident, the method including the steps of:

removing the tip cap from the syringe luer connector to open the syringe barrel and placing the removed tip cap at a first location;

delivering the prescribed dose to an interior of the syringe barrel;

gripping the removed tip cap at the first location and moving it to the syringe

barrel containing the prescribed dose;

replacing the tip cap on a syringe luer connector; and

joining the tip cap to the syringe luer connector in a local area by heating and reflowing a section of the tip cap into contact with the syringe luer connector whereupon cooling, a local weld is formed between the tip cap and the syringe luer connector, wherein the syringe is automatically advanced from a station where the tip cap is replaced to a station for making the syringe tamper evident where the local weld is formed.

32. The method of claim 31, wherein the step of delivering the prescribed dose comprises the steps of:

providing a robotic fluid transfer device having a cannula unit that is positioned between first and second positions, wherein the cannula unit includes a cannula;

connecting the cannula to an apparatus that draws the prescribed dose from a medication supply to the cannula when the apparatus is actuated and the cannula unit is in the first position;

moving the robotic fluid transfer device to the second position; and

delivering the prescribed dose into the syringe body through an entrance port created when the tip cap is removed.

33. The method of claim 32, wherein the apparatus aspirates the prescribed dose from the medication supply.

34. The method of claim 32, further including the steps of:

providing an automated device for extending a plunger of the syringe; and

extending the plunger a predetermined distance based upon a volume of the prescribed dose.

35. The method of claim 31, wherein the step of joining the tip cap to the syringe barrel comprises the steps of:

providing a heat-stake device that includes a direct contact-heated tool;

heating the tool to a predetermined temperature and placing the tool into contact with an outer surface of the tip cap;

directing the tool into the tip cap by applying a predetermined pressure thereto causing a local section of the tip cap to melt and reflow into contact with an outer surface of the syringe luer connector; and

removing the tool such that the reflow cools and the local weld is formed.

36. The method of claim 31, wherein the step of joining the tip cap to the syringe luer connector comprises the steps of:

providing an ultrasonic welder that includes a probe;

activating the welder so as to create vibratory energy that is transferred through the probe directly to the tip cap and the syringe luer connector, while the probe simultaneously applies a welding pressure; and

transmitting the vibrations through the tip cap and syringe luer connector to a

joint area where the vibratory energy is converted to heat through friction which causes the tip cap and the syringe luer connector to melt, whereby the tip cap is joined to the syringe barrel.

37. The method of claim 31, wherein the step of joining the tip cap to the syringe barrel comprises the steps of:

providing a laser;

directing an emitted laser beam to an outer surface of the tip cap to cause a local section of the tip cap to melt and reflow into contact with an outer surface of the syringe luer connector; and

deactivating the laser such that the reflow cools and the local weld is formed.

38. The method of claim 31, further including the step of:

receiving and holding the syringe barrel with a gripper member after the tip cap has been replaced but prior to the joining the tip cap to the syringe barrel.